Recombinant TVAL3 protein (His tag)

Catalog Number	550290
Species	Human
Expression System	E. coli
Accession	A0A0B4J271
Molecular Weight	Predictes a molecular mass of 12.24 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	22-114
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 22-114 aa (A0A0B4J271) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant T cell receptor alpha variable 12-3 (TRAV12-3) fragment (residues 22-114) from Homo sapiens, engineered as a stable and soluble unit for structural and functional studies of T cell receptor-mediated immune recognition. The T cell receptor alpha variable 12-3 (TRAV12-3) is a V region of the variable domain of the T cell receptor alpha chain, essential for antigen recognition in adaptive immunity. It forms part of the alpha-beta T cell receptor complex, which binds peptide-major histocompatibility (pMH) complexes on antigen-presenting cells, initiating T cell activation. This interaction triggers intracellular signaling through CD3 clustering, LCK phosphorylation, and downstream pathways (calcium, MAPK, NF-kB), leading to T cell growth, differentiation, and immune response regulation. The receptor is localized to the cell membrane and undergoes V-(D)-J rearrangement in the thymus to generate a self-MH restricted T cell repertoire. The provided fragment (residues 22-114) represents a computationally optimized, stable domain for biochemical and structural analyses.